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10/082,466	10/082,466 02/25/2002		Tetsuya Okumura	57090 (70904)	4306
21874	7590	03/13/2006		EXAMINER	
EDWARD		ELL, LLP	PSITOS, ARISTOTELIS M		
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BOSTON, 1	MA 0220	5	ART UNIT	PAPER NUMBER	
				2656	
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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)					
	10/082,466	OKUMURA ET AL.					
Office Action Summary	Examiner	Art Unit					
	Aristotelis M. Psitos	2656					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period was pailure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	I. lety filed the mailing date of this communication. O (35 U.S.C. § 133).					
Status		,					
Responsive to communication(s) filed on <u>02 Fe</u> This action is FINAL . 2b)⊠ This Since this application is in condition for allowant closed in accordance with the practice under E	action is non-final. nce except for formal matters, pro						
Disposition of Claims							
4) ☐ Claim(s) 1-20 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-20 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or	vn from consideration.						
Application Papers	•						
9) The specification is objected to by the Examiner 10) The drawing(s) filed on is/are: a) acce Applicant may not request that any objection to the d Replacement drawing sheet(s) including the correction 11) The oath or declaration is objected to by the Examiner	epted or b) objected to by the E drawing(s) be held in abeyance. See on is required if the drawing(s) is obje	37 CFR 1.85(a). ected to. See 37 CFR 1.121(d).					
Priority under 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
Attachment(s)							
1) Motice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary (I Paper No(s)/Mail Dat 5) Notice of Informal Pa 6) Other:	e					

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/13/05 has been entered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of the independent claims with respect to "the predetermined length mark signal measurement means", as defined in the claims must be shown or the feature(s) canceled from the claim(s). The figures fail to clearly depict such a means, i.e., elements 6 & 8 as argued. The examiner recommends appropriate labeling of such elements to clearly depict such.

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filling date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Response to Arguments

Applicant's arguments filed 2/2/06 have been fully considered but they are not persuasive The examiner strongly recommends appropriate labeling of the argued elements 6,7,8 & 9 as the "predetermined measuring means" to clearly depict the claimed element. This would obviate any confusion with the independent claims and the figures.

Claim Objections

Claims 13-16 are objected to because the desired function(s) recited therein do not follow from the structure/elements positively recited in their respective parent claim. Element 10 yields such a ratio, however, this element is not included in the predetermined length mark signal measurement means as stated in applicants communication on page 6 thereof in discussing figures 1 & 3.

Claim 20 is objected to because of the following informalities: As recited, the examiner concludes that this claim, as presented, i.e., dependent upon claims 13-16, attempts to redefine the "predetermined length mark signal measurement means". However, such an element is already found in parent claims 13-16. Hence it is not clear if this element has two such elements recited. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In particular as claimed in independent claims 1 and 2:

a) lines 2-5: " predetermined length mark signal measurement means for measuring reproduction signal characteristics respectively of a short reproducing power control mark and of a long reproducing power control mark from information data that is recorded in data recording area of an optical recording medium;...".

b) lines 6-8 recite:

"... power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks,".

However, as stated on page 6 of applicants' response dated 12/13/05, elements 6 & 8 are the claimed "calculating means" for measuring characteristic of the short pulse. The examiner interprets elements 7 & 9 as that section yielding the long reproducing power control mark. Therefore the examiner interprets elements 6-9 as the first claimed means in the independent claims.

Nevertheless, as DISCLOSED, these signals are then further processed by element 10 – see paragraph 62 the equivalent PGPUB document 2002/0145956 A1.

Therefore, it is quite clear, the claimed power control means of these claims CANNOT be responsive to the claimed elements WITHOUT the division circuit element 10.

It is noted that in claims 13-18, introduces functional limitation(s) predicated upon a ratio between the amplitude values. However, since there is NO positive structure drawn to the divisor element (element 10) these claims stand in stark contradiction with the position taken on page 6 of applicants' response.

If applicants were to include the limitations of claims 13 and 14 into their respective parent claims, then this rejection would no longer be maintained.

The remaining dependent claims fail to clarify the above and fall accordingly.

This is not an insufficient disclosure rejection, but rather a vague and indefinite rejection predicated in that the claims recitation in lines 6-8 does not follow from the elements positively recited from lines 2-5

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fuji ('400). The examiner interprets the acknowledged prior art figures of – 5-9 of the present application as being that of JP 08-63817, and the Fuji document is the US equivalent thereof. Applicants' depiction of the acknowledged prior art hardware (figure 5) is greatly appreciated. The examiner concludes that these figures are found in the above note Fuji reference.

As noted in that figure and as analyzed below:

Claim 1

· Fuii

An optical reproducing device comprising:

see abstract/title

predetermined length mark signal

element 4 and discussion thereof

measurement means for measuring

in figure 16

reproduction signal characteristics

of a short reproducing power control

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mark and of a long reproducing power control mark information data that is recorded in data recording area of an optical recording medium; and

power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks, see discussion with respect to element 8 in figure 16

wherein the predetermined length mark signal measurement means is further configured and arranged for detecting a specific pattern including therein the short reproducing power control mark from amongst a bit arrangement pattern of the information data in the data recording area, and when the specific pattern is detected to measuring the reproduction signal characteristic corresponding only to the short reproducing power control mark included in

the specific pattern.

inherently follows - see discussion with respect to element 4a in figure 16.

As analyzed above, the examiner interprets the short and long reproducing power control marks as being produced from information data recorded in the data area of the record medium.

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Alternatively, if applicants' can convince the examiner that such is not the case, then the examiner modifies the above base reference with the well known concept as discussed in Fuji/-846 – the recording of test pulses/ of either recording long and short power control pulses in the "header" region of a data recording area. Such header regions are alternatively identified as power control regions.

It would have been obvious to modify the base system Fuji with such well-known capabilities, motivation is to provide for appropriate long and short power control pulses in the record medium in the data recording area for their subsequent inherent use for power control.

Response to Arguments

Applicant's arguments with respect to these claims have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of Tanaka et al

The Fuji reference doesn't specify the particular bit pattern as defined by claims 3 and 5. He notes however in col. 11 lines 38 plus indicates the short pulse.

The Tanaka reference clearly depicts various signal sequences (bits) see the discussion with respect to his figure 10 starting at col. 9 lines 15 and the problems associated (thermal shift) with such pulses in this environment.

It would have been obvious to modify the base system with the above teaching from Tanaka et al, motivations is to compensate for the thermal-shift pattern and provide for a better signal detection ability.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

4. Claims 13,15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1,3,5 as stated in paragraphs 2 and 3 above, and further in view of Fuji – '846.

With respect to the amplitude ratio limitations as described in these claims, Fuji ('846) further discloses in this environment the ability of using such an amplitude ratio –see the description of figure 5 for instance, in order to yield a tighter control signal for his laser driver.

It would have been obvious to modify the base system as relied upon in paragraphs 1 and 3 above with the additional teaching from Fuji ('846) motivation is to yield a better laser driver control signal as discussed in Fuji with respect to his figure 5.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

5. Claims 19/1, 19/3 and 19/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3&5 as stated in paragraphs 2 and 3 above above, and further in view of EP 0887790.

With respect to the ability of calculating an "average" of the short pulses measured, the EP document discloses the ability of such – see his discussion with respect to mean amplitude ratio of the short and long marks starting in col. 31 in line 55.

It would have been obvious to modify the base system as relied upon above in paragraphs 1 and 2 with the additional teaching from the EP document motivation is for the reasons discussed in cols. 32 line 54 to col. 34 line 13.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

6 Claims 1, 2,7-8,13,14 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 2000-99945.

The following analysis is made:

Claim 1

JP 2000-99945

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An optical reproducing device comprising:

See accompanying Translation of

The document at paragraphs 1 -3.

predetermined length mark signal measurement means for measuring reproduction signal characteristics of a short reproducing power control mark and of a long reproducing power control mark information data that is recorded in data recording area of an optical recording medium; and power control means for controlling

element 6 and discussion thereof in either figures 3, 8 or 5.

The description e.g. paragraph

The description e.g. paragraph
20-41 (either short or long
mark) at col. 17, but see paragraph
6 with respect to the JP 8-63817 which
relies upon both short and long control pulses

see discussion with respect to elements
9 & 11 in figure 1

power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks,

wherein the predetermined length mark
signal measurement means is further
configured and arranged for detecting
a specific pattern including therein
the short
reproducing power control mark from
amongst a bit arrangement pattern of
the information data in the data recording area,
and

see discussion in parag.35, 2 Tc is present

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when the specific pattern is detected to measuring the reproduction signal characteristic corresponding only to the short reproducing power control mark included in the specific pattern.

In the above analysis, the JP document provides for a laser power control capability predicated upon the mean amplitude valued calculated from the regenerated mark pattern. The overall discussion of the reference recites the prior art JP 8-63817 – see Fuji above – for both short and long control pulses, and continues to discuss only the short pulse at paragraph 35. Hence the examiner concludes that the claimed invention as recited above in anticipated.

With respect to claim 2, this claim includes the following limitations:

"...wherein the predetermined length mark signal measurement means includes:

data reproduction means for reproducing information data bits from a reproduction signal of the optical recording medium;

comparison means for comparing a bit arrangement pattern of the information data reproduced by the data reproduction means with a specific pattern including the short reproducing power control mark, and for detecting a coincidence of the specific pattern in the bit arrangement pattern of the information data; and

signal measurement means for measuring the reproduction signal characteristic of information data bits corresponding to the short reproducing power control marks when the comparison means detects the bit arrangement pattern of the information data coincides with the specific pattern including the short reproducing power control mark."

Such in considered present in the above JP system – see the discussion of the pattern detection with respect to signal found in section 402 of figure 4 for instance, as well as the operation of elements 12 and 11 thereof.

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With respect to the limitations of 7-8, the examiner interprets the output diff. Amplifier element 8 in the above document to meet such limitations.

With respect to the limitations of claims 13 and 14, they are found in paragraph 6 of the JP system's disclosure thereof.

7. Claims 3-6, 9-12 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 2 in paragraph 6 above, and further in view of Tanaka et al

With respect to the particular mark lengths of 2T as found in these claims, the Tanaka reference clearly depicts various signal sequences (bits) see the discussion with respect to his figure 10 starting at col. 9 lines 15 and the problems associated (thermal shift) with such pulses in this environment.

It would have been obvious to modify the base system with the above teaching from Tanaka et al, motivations is to compensate for the thermal-shift pattern and provide for a better signal detection ability.

With respect to the limitations of claims 9-12, they are met by the diff. Amplifier, e.g., element 8 in figure 3 of the JP system.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

8. Claims 19 and 20 – are as dependent upon claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to the above claims as stated in paragraphs 6-7 above, and further in view of EP 0887790.

The ability of using "averaging" or providing for a mean of the detected pulses is taught in the document discloses the ability of such – see his discussion with respect to mean amplitude ratio of the short and long marks starting in col. 31 in line 55.

It would have been obvious to modify the base system as relied upon above in paragraphs 1 and 2 with the additional teaching from the EP document motivation is for the reasons discussed in cols. 32 line 54 to col. 34 line 13.

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Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

9. Claims 1, 7, and 19/1 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsutsui et al further considered with W0/97/29485. The examiner is only providing a copy of US patent 61111833 the US equivalent to the WO document.

The following analysis is made:

Claim 1

Tsutsui et al

An optical reproducing device comprising

abstract/title

predetermined length mark signal measurement means for measuring reproduction signal characteristics of a short reproducing power control mark and of a long reproducing power control mark information data that is recorded in data recording area of an optical recording medium; and

elements 31 & 36 and discussion thereof in figures 4, see col. 18 line 65 to. col. 19 line 10.

power control means for controlling reproducing power of a light beam based on the measured reproduction signal characteristics of the short and long reproducing power control marks,

see discussion with respect to elements

30 and 4, in fig.4

see below analysis / or alternatively

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wherein the predetermined length mark
signal measurement means is further
configured and arranged for detecting
a specific pattern including therein
the short
reproducing power control mark from
amongst a bit arrangement pattern of
the information data in the data recording area,
and
when the specific pattern is detected
to measuring the reproduction signal
characteristic corresponding only to the short
reproducing power control mark included in
the specific pattern.

secondary reference to Nakagawa et al discusses the ability of detecting the 1t/2t bit pattern from a plurality of bit patterns – see the discussion wrt element 234 in figure 11.

In the above analysis Tsutsui et al discloses a system that reproduces both long and short pulses and performs further signal processing thereon so as to feed appropriate power control signal to his laser driver – see the discussion with respect to the feedback capability through element 30.

The examiner interprets the wherein clause of claim 1 as a desired result that as present must follow from the claimed elements. Since the claimed elements are present, then under 102 considerations, the desired function(s) as found in the wherein clause is present as well.

If applicants can convince the examiner that such desired results do not follow from the structure positively recited and analyzed above, then under 103 considerations, the examiner presents the additional reference to Nakagawa et al, see the discussion with respect to 1T and 2T bit detection section element 234 in figure.

It would have been obvious to modify the base system of Tsutsui et al with the above additional 1T/2T bit detection circuitry, motivation is to detect the short pulse as desired.

With respect to claim 7, this means is interpreted as the diff. Amplifier 35 in figure 4.

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With respect to claim 19, this claim recites an "averaging" capability for the reproduced signals. In the Tsutsui et al system, the output signal(s) from element 31 are further processed by both a band pass filter and an envelope detector – elements 32 & 33. The examiner interprets the operation of these elements as meeting this claimed limitation.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection. .

10. Claims 2, 8, 19/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsui et al further considered with WO97/294485.

The references are relied upon as stated above in paragraph.

Furthermore, with respect to claim 2, this includes the additional elements:

"...wherein the predetermined length mark signal measurement means includes:

data reproduction means for reproducing information data bits from a reproduction signal of the optical recording medium;

comparison means for comparing a bit arrangement pattern of the information data reproduced by the data reproduction means with a specific pattern including the short reproducing power control mark, and for detecting a coincidence of the specific pattern in the bit arrangement pattern of the information data; and

signal measurement means for measuring the reproduction signal characteristic of information data bits corresponding to the short reproducing power control marks when the comparison means detects the bit arrangement pattern of the information data coincides with the specific pattern including the short reproducing power control mark."

The examiner interprets the operation of element 234 in the WO document to include both a comparison and measurement means as recited in the claim.

With respect to claim 8, this is the diff. Amplifier 35 in figure 4.

With respect to claim 19, this claim recites an "averaging" capability for the reproduced signals.

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In the Tsutsui et al system, the output signal(s) from element 31 are further processed by both a band pass filter and an envelope detector – elements 32 & 33. The examiner interprets the operation of these elements as meeting this claimed limitation.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

11. Claims 3-6, 9-12 and 19/3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 2 as stated in paragraphs 9 and 10 above, and further in view of Takada.

With respect to the particular mark lengths of 2T as found in these claims, the Tanaka reference clearly depicts various signal sequences (bits) see the discussion with respect to his figure 10 starting at col. 9 lines 15 and the problems associated (thermal shift) with such pulses in this environment.

It would have been obvious to modify the base system with the above teaching from Tanaka et al, motivations is to compensate for the thermal-shift pattern and provide for a better signal detection ability.

It would have been obvious to modify the base system as relied upon as stated above with the additional teaching from Tanaka, motivation is to permit the ability of compensating for a variety of "short" and "long" pulses and hence compensate for thermal shift for each bit pattern detected.

With respect to claims 9-12, they recite the same element as found in claims 7 & 8 and are met by the diff. Amplifier in the base reference as discussed above.

With respect to claim 19, this claim recites an "averaging" capability for the reproduced signals. In the Tsutsui et al system, the output signal(s) from element 31 are further processed by both a band pass filter and an envelope detector – elements 32 & 33. The examiner interprets the operation of these elements as meeting this claimed limitation.

12. Claims 13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 7, 8, 9, 10,11 and 12 as stated in paragraphs 9 and 10 above, and further in view of EP 0887790.

With respect to these claims, the appropriate ratio measuring ability between the amplitude values of the short and long pulses is further discussed in the EP document – see the discussion with respect to elements 6, 7 and 9 starting at col. 17 at line 23 for instance.

It would have been obvious to modify the base system as relied upon above with such additional teachings, motivation is to ensure proper reproduction power control by further processing the detected pulses for the further system enhancement as discussed in the EP reference.

With respect to claim 20, the additional element with respect to calculating the "average" of the signal characteristics of the reproduced signals is also taught by the EP document, note the disclosure commencing at col. 11 line 49 of the EP reference. The ability of additionally modifying the system so as to also include such is considered obvious for the reasons discussed therein.

Response to Arguments

Applicant's arguments filed 2/16/05 have been fully considered but they are moot to the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 3.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where
this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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